an adaptive system generating the adaptive parameter data according to an update equation.

22. (new) The apparatus of Claim 21 wherein the adaptive system generates the adaptive parameter data based on both the torque and the inertia.

23. (new) The apparatus of Claim 20 wherein the controller circuit is a discrete controller.

24. (new) The apparatus of Claim 23 further comprising an actuator, and wherein the output comprises a controlled electric current coupled to the actuator.

25. (new) The apparatus of Claim 24 wherein the controlled electric current is controlled by pulse width modulation.

26. (new) The apparatus of Claim 24 wherein the controller circuit further comprises a digital-to-analog converter providing the controlled electric current.

27. (new) The apparatus of Claim 24 wherein the sensed position signal is derived from a read/write head.

28. (new) An apparatus comprising:
    adaptive parameter data based on at least one of a torque and an inertia; and
    a controller circuit for receiving a sensed position signal and adapted to receive reference data indicating a desired position, the controller circuit for generating an output which is based on the adaptive parameter data.

29. (new) The apparatus of Claim 28 wherein the controller circuit comprises a first and second controllers that are stable.

30. (new) The apparatus of Claim 29 wherein the first and second controllers use an error model.

31. (new) The apparatus of Claim 28 wherein the sensed position signal is sensed by a read/write head.

32. (new) A method comprising the step of adaptively generating the output responsive to a sensed position signal, a desired position signal and at least one of a torque and an inertia.

33. (new) The method of Claim 32 wherein the output is controlled based on adaptive parameter data.

34. (new) The method of Claim 33 wherein the adaptive parameter data is updated based on at least one of a torque and an inertia.

35. (new) The method of Claim 34 wherein the adaptive parameter data is updated digitally in real time using instructions stored in a computer readable program storage device.

36. (new) The method of Claim 32 wherein the output is coupled to a voice coil motor in a disc drive.--